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TECHNOLOGY, PATENTS AND LICENSING, INC./PRIME
2003 SOUTH EASTON RD
SUITE 208
DOYLESTOWN, PA 18901

EXAMINER

SHELEHEDA, JAMES R

ART UNIT PAPER NUMBER

2623

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,983

Applicant(s)

ELDERING ET AL.

Examiner

James Sheleheda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 102-143 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 102-143 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/11/06.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/11/06 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 102-143 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 102, 108 and 117, applicant's disclosure as originally filed discloses monitoring user interactions and applying heuristics rules to the interactions to predict family size (see Fig. 10B and pages 26 and 27). The specification fails to support

“wherein the number of people in the household is not directly observable from the viewer interaction data”, as recited in claims 102, 108 and 117. While applicant discloses applying heuristic rules to the “viewer interaction data” to predict the family size, there is no specific disclosure as to what information may or may not be “directly observable” from the viewer data.

As to claims 126, 132 and 138, applicant’s disclosure as originally filed discloses monitoring user interactions and applying heuristics rules to the interactions to predict family size (see Fig. 10B and pages 26 and 27). The specification fails to support “wherein the number of people in the household *cannot* be directly obtained through statistical analysis of the viewer interaction data”, as recited in claims 126, 132 and 138. While applicant specifically discloses the use of heuristic rules, there is no specific disclosure as to what information may or may not be obtained through statistical analysis, or that specifically describes statistical analysis as being incapable of deriving the information.

As to claims 127, 133 and 139, applicant’s disclosure as originally filed discloses monitoring user interactions and applying heuristics rules to the interactions to predict family size (see Fig. 10B and pages 26 and 27). The specification fails to support “wherein the number of people in the household is not derivable directly from the viewer interaction data”, as recited in claims 127, 133 and 139. While applicant discloses the method of applying heuristic rules to the “viewer interaction data” to predict the family

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size, there is no specific disclosure as to what information may or may not be derived directly from the viewer data, or that the *number of people in the household* is specifically *not* directly derivable.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 102-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. (Alexander) (6,177,931) (of record) in view of Rosser (6,446,261) (of record).

As to claim 102, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining information of a household (column 30, lines 29-32), the method comprising:

(a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52);

(b) processing the viewer interactions to obtain viewer interaction data corresponding to the viewer interactions (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);

(c) applying one or more heuristic rules to at least a subset of the viewer interaction data (analysis learning viewer preferences based upon the user data;

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column 29, lines 14-30 and 56-67 and column 30, lines 1-29), wherein the heuristic rules related at least one aspect of the viewer interaction data to viewer characteristics (determining preference information about the viewer from the profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34). While Alexander discloses (d) inferring viewer characteristics about the household (such as inferring whether or not the viewer is married and has children; column 30, lines 30-32) based on the application of the heuristic rules (column 30, lines 17-37), wherein the characteristic is not directly observable from the viewer interaction data (such as age and marriage status; column 30, lines 17-37), he fails to specifically disclose inferring the number of people in the household.

In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include inferring the number of

people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

As to claim 108, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining information of a household (column 30, lines 29-32), the method comprising:

(a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52), the viewer interactions occurring during one or more interaction sessions (compiled viewer profile data, column 29, lines 14-21, which is periodically repeated to generate new updated profiles, column 29, lines 22-30);

(b) processing the viewer interactions to obtain viewer interaction data (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);

(c) applying one or more heuristic rules to at least a subset of the viewer interaction data (analysis learning viewer preferences based upon the user data; column 29, lines 14-30 and 56-67 and column 30, lines 1-29), for each interaction session (determining preference information about the viewer from the current profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34), wherein the heuristic rules relate at least one aspect of the viewer interaction data to viewer characteristics (determining preference information about the viewer from the profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34). While Alexander discloses (d) inferring viewer characteristics about the household

(such as inferring whether or not the viewer is married and has children; column 30, lines 30-32) from the viewer interaction data for each interactive session (column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34) based on the application of the heuristic rules (column 30, lines 17-37), wherein the characteristic is not directly observable from the viewer interaction data (such as age and marriage status; column 30, lines 17-37), he fails to specifically disclose inferring the number of people in the household.

In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include inferring the number of people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

As to claim 117, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining information of a household (column 30, lines 29-32), the method comprising:

(a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52), the viewer interactions occurring during one or more viewing periods (compiled viewer profile data, column 29, lines 14-21, which is periodically repeated to generate new updated profiles, column 29, lines 22-30);

(b) processing the viewer interactions to obtain viewer interaction data (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);

(c) applying one or more heuristic rules to the viewer interaction data (analysis learning viewer preferences based upon the user data; column 29, lines 14-30 and 56-67 and column 30, lines 1-29) for each viewing period (determining preference information about the viewer from the current profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34), wherein the heuristic rules relate at least one aspect of the viewer interaction data to viewer characteristics (determining preference information about the viewer from the profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34). While Alexander discloses (d) inferring viewer characteristics about the household (such as inferring whether or not the viewer is married and has children; column 30, lines 30-32) from the viewer interaction data (column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34) based on the application of the heuristic rules (column 30, lines 17-37), wherein

the characteristic is not directly observable from the viewer interaction data (such as age and marriage status; column 30, lines 17-37), he fails to specifically disclose inferring the number of people in the household.

In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include inferring the number of people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

As to claims 103, 112 and 121, Alexander and Rosser disclose wherein the heuristic rules are probabilistic in nature (wherein the rules are inherently probabilistic in that it is predicting demographic characteristics of the user; see Alexander at column 30, lines 17-37).

As to claims 105, 114 and 123, Alexander and Rosser disclose wherein said monitoring includes at least some subset of channel changes (see Alexander at column 28, lines 32-37), volume changes (see Alexander at column 28, lines 46-49), record commands (see Alexander at column 28, lines 44-46) and time of viewer interaction (see Alexander at column 28, lines 32-35).

As to claims 106, 115 and 124, Alexander and Rosser disclose evaluating channel change commands and associated viewing times (see Alexander at column 28, lines 30-35 and column 29, lines 34-36) to group the viewer interaction characteristics (accumulated viewing statistics; see Alexander at column 29, lines 50-55).

As to claims 107, 116 and 125, Alexander and Rosser disclose wherein the viewer interaction data includes at least some subset of channel changes per time period (channel changes gathered since the last analysis; see Alexander at column 28, lines 30-37 and column 29, lines 22-30).

As to claims 109 and 118, Alexander and Rosser disclose processing the viewer interactions for an interaction session (or viewing period) (processing interactions for the current accumulated profile; see Alexander at column 29, lines 14-37) to generate session (or period) interaction data (determining the interaction made the viewer and circumstances surrounding those actions for the most current accumulated session data; see Alexander at column 28, lines 30-52 and column 29, lines 14-37) for each

interaction session (or viewing period) (for each update of accumulated data; see Alexander at column 29, lines 22-37).

As to claims 104, 113 and 122, while Alexander and Rosser disclose wherein the heuristic rules assign probabilities (wherein the rules are inherently probabilistic in that it is predicting demographic characteristics of the user; see Alexander at column 30, lines 17-37) of the number of people in the household based on the viewer interaction data (predicted number of people based upon accumulated user inputs; see Alexander at column 29, lines 22-67 and column 30, lines 17-38 and Rosser at column 8, lines 20-38), they fail to specifically disclose assigning probabilities for different numbers.

The examiner takes Official Notice that it was notoriously well known in the art at the time of invention by applicant to assign a plurality of different probabilities to different values, such as in typical frequency distribution graphs which identify the corresponding probability alongside a plurality of different possible values, for the typical benefit of providing a means to easily identify the probability of any of a plurality of possible values occurring.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander and Rosser's system to include assigning probabilities for different numbers for the typical benefit of providing a means to easily identify the probability of any of a plurality of possible values occurring.

As to claims 110 and 119, while Alexander and Rosser disclose wherein said processing includes processing the subscriber interactions for multiple interaction sessions (or viewing periods) (wherein the profile is constantly updated with current session information; see Alexander at column 29, lines 36-43 and lines 23-27) to generate interaction data for the multiple viewing sessions (or viewing periods) (to generate an updated profile containing all of the viewing session information; see Alexander at column 29, lines 22-30), they fail to specifically disclose generating average interaction characteristics.

The examiner takes Official Notice that it is notoriously well known in the art to use an average as representative of a large range of values for the typical benefit of finding a value with the best correlation and reducing the effects of extreme values on a system.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander and Rosser's system to include generating average interaction characteristics for the typical benefit of finding a value with the best correlation and reducing the effects of extreme values on a system.

As to claim 111 and 120, Alexander and Rosser disclose wherein wherein the heuristic rules are applied to the average interaction characteristics (assigning rules to the current stored interactions, see the rejection of claims 110 and 119 above and see Alexander at column 29, lines 34-43 and column 30, lines 17-37).

As to claims 126, 132 and 138, Alexander and Rosser disclose wherein the number of people in the household cannot be *directly* obtained through statistical analysis of the viewer interaction data (see Alexander at column 28, line 13-column 29, line 55).

As to claims 127, 133 and 139, Alexander and Rosser disclose wherein the number of people in the household is not derivable *directly* from the viewer interaction data (see Alexander at column 28, line 13-column 29, line 55).

As to claims 128, 134 and 140, Alexander and Rosser disclose wherein the heuristic rules are predefined (wherein the data is analyzed by some predetermined rules to infer the user characteristics; see Alexander at column 29, line 56-column 30, line 38).

As to claims 129, 135 and 141, Alexander and Rosser disclose wherein the heuristic rules remain unchanged at least during steps (c) and (d) (wherein it is the *user* data that is changing over time; see Alexander at column 29, line 56-column 30, line 38 and Rosser at column 8, lines 31-38).

As to claims 130, 136, and 142, Alexander and Rosser disclose wherein the heuristic rules create an inferential link between the viewer interaction data and the

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number of people in the household (see Alexander at column 29, line 56-column 30, line 38 and Rosser at column 8, lines 31-38).

As to claims 131, 137 and 143, Alexander and Rosser disclose wherein the heuristic rules provide a predictive value that the household has the number of people inferred in step (d) (see Rosser at column 8, lines 31-38 and column 16, lines 19-23).

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 102, 103, 105, 107, 108-112, 114, 116, 117-121 and 123 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5, 9-11, 13, 14 and 16 of U.S. Patent No. 6,457,010 in view of Rosser.

Regarding claim 102, of the instant application:

On lines 1-2, the "computer implemented method" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 1-3.

On line 3, the "monitoring" corresponds to U.S. Patent No. 6,457,010, claim 1, line 3.

On lines 4-5, the "processing" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 4-6.

On lines 6-8, the "applying" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 7-12 and claim 5, which fails to disclose wherein the demographic trait is specifically the number of people in the household. In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38). It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify U.S. Patent No. 6,457,010 to include inferring the number of people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

On lines 10-13, the "inferring" corresponds to U.S. Patent No. 6,457,010, claim 11-12 and claim 5, and Rosser at column 8, lines 35-38 and column 16, lines 19-23).

Claim 103, of the instant application, corresponds to U.S. Patent No. 6,457,010, claim 3.

Claim 105, of the instant application, corresponds to U.S. Patent No. 6,457,010, claim 9.

Claim 107, of the instant application, corresponds to U.S. Patent No. 6,457,010, claim 16.

Regarding claim 108, of the instant application:

On lines 1-2, the "computer implemented method" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 1-3.

On lines 3-4, the "monitoring" corresponds to U.S. Patent No. 6,457,010, claim 1, line 3 and claim 11.

On lines 5-6, the "processing" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 4-6 and claims 10-11.

On lines 7-11, the "applying" corresponds to U.S. Patent No. 6,457,010, claim 1, lines 7-12 and claim 5, which fails to disclose wherein the demographic

trait is specifically the number of people in the household. In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38). It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify U.S. Patent No. 6,457,010 to include inferring the number of people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

On lines 12-15, the "inferring" corresponds to U.S. Patent No. 6,457,010, claim 11-12 and claim 5, and Rosser at column 8, lines 35-38 and column 16, lines 19-23).

Claim 109, of the instant application, corresponds to U.S. Patent No. 6,457,010, claims 10 and 11.

Claim 110, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 13.

Claim 111, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 14.

Claim 112, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 3.

Claim 114, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 9.

Claim 116, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 16.

Regarding claim 117, of the instant application:

On lines 1-2, the "computer implemented method" corresponds to U.S.
Patent No. 6,457,010, claim 1, lines 1-3.

On lines 3-4, the "monitoring" corresponds to U.S. Patent No. 6,457,010,
claim 1, line 3 and claim 11.

On lines 5-6, the "processing" corresponds to U.S. Patent No. 6,457,010,
claim 1, lines 4-6 and claims 10-11.

On lines 7-10, the “applying” corresponds to U.S. Patent No. 6,457,010, claim 1, lines 7-12 and claim 5, which fails to disclose wherein the demographic trait is specifically the number of people in the household. In an analogous art, Rosser discloses video distribution system (Fig. 1) wherein user interactions are monitored (column 8, lines 4-38) to create a user profile (column 8, lines 4-38) including a prediction of the number of people in a family (actual size of the viewing family; column 8, lines 27-38 and column 16, lines 20-23) wherein the number of people in the household is not directly observable from the user interactions (predicted *probability* of specific factors; column 8, lines 35-38) for the typical benefit of allowing the targeting of advertisements (column 4, lines 15-41) based upon profile factors, such as family size, without the need for demographic and psycho-graphic databases (column 8, lines 11-38). It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify U.S. Patent No. 6,457,010 to include inferring the number of people in the household, as taught by Rosser, for the typical benefit of allowing the targeting of advertisements based upon the number of people in a family.

On lines 11-14, the “inferring” corresponds to U.S. Patent No. 6,457,010, claim 11-12 and claim 5, and Rosser at column 8, lines 35-38 and column 16, lines 19-23).

Claim 118, of the instant application, corresponds to U.S. Patent No. 6,457,010, claims 10 and 11.

Claim 119, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 13.

Claim 120, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 14.

Claim 121, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 3.

Claim 123, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 9.

Claim 125, of the instant application, corresponds to U.S. Patent No.
6,457,010, claim 16.

Response to Arguments

8. Applicant's arguments filed 04/11/06 have been fully considered but they are not persuasive.

a. On page 10, applicant argues that Alexander's profile is based on "simple statistical analysis and basic viewer profile data" and does not teach or suggest heuristic rules.

In response, as indicated in the previous action, Alexander is operable to “determine” if the “viewer is a fan of a particular team” (see Alexander at column 29, lines 60-67). In such a case a “heuristic rule” is applied that if viewers frequently watch the Boston Red Sox then they are statistically likely to be Boston fans (ex. Frequent viewers of a particular team are likely fans of that team). The examiner finds this to be analogous to the example cited by the applicant wherein if an individual watch “Days of our Lives” then they are likely to be a housewife (or “Days of our Lives” fan) (see specification at Fig. 10a). Similarly, a “heuristic rule” as applied in conjunction with the instant application may further suggest that as a result of being a fan of a particular team, that they may statistically likely be interested in watching particular future programs and/or advertisements related to that team not necessarily explicitly reflect in the EPG data (ex. Boston Red Sox fans are likely to be interested in buying Boston Red Sox products, watching Boston Red Sox advertisements and/or future programming related to the Boston Red Sox) (column 29, lines 60-67, column 30, lines 17-29, column 31, line 25-column 32, line 6 and column 32, lines 24-34). While Alexander describes utilizing “simple statistical analysis” (see column 29, lines 36-37 and lines 50-60), he clearly then describes utilizing the compiled statistics to **then** determine specific characteristics about the user, such as being a fan of a particular sports team (column 29, lines 60-67), the viewers age (column 30, lines 29-37) or marriage status (column 30, lines 29-37). Merely compiling and “analyzing” the user input data, such as channel and volume

inputs (column 28, lines 30-52), will not result in the specific user characteristic, such as being a fan of a particular sports team, the viewers age or marriage status, without specific rules defining how they relate to one another, i.e. correlating channel changes, volume, EPG usage, programming types with actual viewer characteristics, such as age, married, etc. While Alexander may utilize statistical analysis to generate the user profile, he clearly discloses wherein the profile information is then *further* analyzed to determine actual user characteristics.

Furthermore, it is noted that applicant's arguments on page 13, in regards to heuristic rules, are incorrect. More specifically, applicant states, without providing any supporting evidence, that heuristic rules are used to infer or derive something from the data that ***could not*** be calculated determined or observed directly from a statistical analysis of the data. While heuristic rules *can* be used to infer something that ***could not*** be calculated, they are not limited to this, and are often utilized simply as a short-cut, such as for complex calculations which would require excessive processing and time. Thus, applicant's arguments are not persuasive. Furthermore, applicant later states that "although the development and/or application of heuristic rules may include some mathematical analysis, such elements are not ***essential*** to a heuristic rule." Thus, despite applicant's arguments, the mere fact that Alexander performs

analysis on his profile does not negate whatsoever the presence of clear heuristic rules.

Finally, applicant argues that the fact that Alexander discloses that the viewer characteristics that form the viewer profile are developed “over time” and “with sufficient data” is consistent with statistical analysis, but not ***necessarily*** with heuristic rules.

In response, applicant’s argument is not convincing, as even applicant admits that having the characteristics developed “over time” and “with sufficient data” may be consistent with heuristic rules. The mere fact that some heuristic rules may exist where this is not the case is irrelevant, as this would clearly not apply to all heuristic rules. Applicant’s own disclosure specifically discloses wherein user statistics are compiled over time (see Fig. 7 and page 23, lines 13-24), and furthermore, as described by Alexander, wherein the provide will *over time* provide information to characterize the household (page 33, line 21-page 34, line 9).

b. On page 14, applicant argues the Alexander’s identifying a fan of a particular *program* is performed based on observation and/or analysis of a consumer’s behavior, and not necessarily by through a heuristic rule.

In response, it is noted that applicant has misunderstood the argument presented in the previous application. It was not that Alexander would merely

identify a favorite **program** by observing that you watch the program. The specific argument was that the system would identify the user as a fan of a particular sports team and furthermore identify products the user might be interested in. Merely observing the user would provide no more information than the total amount of viewing of baseball games, either in general or in regards to a specific team. It would clearly **not**, by itself, provide specific information about the user, such as being a 30 year old, married, Boston Red Sox fan. An additional step takes place from the assembled data, concerning programming, channel changes, etc..., to the inferred characteristics of the user.

Applicant further argues that a conclusion made on a “statistical basis” is implicitly not a heuristic rule. In response, applicant is incorrect, as applicant’s own definition of a “heuristic rule”, provided on page 12 of the response, states that heuristic rules are determined from “learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge, experience or calculations.” Thus, statistics would clearly be one means to generate a heuristic rule. Such as, based on an analysis of 30,000 survey responses, statistics show that an individual who watches “Days of Our Lives” is statistically likely to be a housewife, or that a male under the age of 30, is likely to enjoy baseball. The statistical analysis merely provides the basis of the heuristic rules, such that, upon meeting a 25 year old man, statistically, you can infer that he would probably enjoy watching a local baseball team play.

c. In response to applicant's arguments on pages 15-17, in regards to the combination of Alexander and Rosser, see the rejections and (a)-(b) above, as Alexander is utilized to disclose utilizing heuristic rules to identify demographic information about a viewer. Rosser is simply relied upon to disclose the usefulness of identifying the specific information of the number of people in the household. It is the combination of Alexander and Rosser which then disclose utilizing heuristic rules to predict the number of people in the household.

d. In response to applicant's arguments on pages 15-17, in regards to the number of people in the household not being directly observable from the viewer interaction data, it is noted that Alexander does clearly teach this limitation as Alexander specifically discloses monitoring user interactions, such as channel changes, volume changes and programs watched and recorded. While these inputs may be used to learn about the user, there is no specific direct input towards the number of people in the household.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

("Data Structures: From Arrays to Priority Queues", by Wayne Amsbury, Wadsworth Publishing Company, 1985, pages 228, 332 and 333) disclosing the use of heuristic rules to simplify complex calculations (see page 228) and the use of frequency

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distributions to assign and indicate a plurality of different probabilities for different values (see pages 332 and 333).

Vogel (6,032,131) disclosing the use of frequency distributions to assign and indicate a plurality of different probabilities for different values (see Figs. 7 and 8A-8E).

Conclusion

10. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (571) 272-7357. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James Sheleheda
Patent Examiner
Art Unit 2623

JS


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600